REMARKS

Claims 1-9, 20, and 22-26 remain in this application. Claims 1, 20, and 22 have been amended. Claim 21 has been canceled. New claims 24-26 have been added.

Claim Rejections under 35 U.S.C. 102(b):

Claims 1, 3-8, and 20-23 were rejected under 35 U.S.C. 102(b) as being anticipated by Quek et al. (US 6,252,290) (hereinafter "Quek").

Claim 1 has been amended to recite that substantially all the patterned first via dielectric layer remains in place after decomposing the photosensitive trench dielectric layer. As Quek does not disclose such an arrangement, but instead discloses removing substantial portions of **both** the via dielectric layer and trench dielectric layer (*see*, Quek, Figure 6, col. 5 lines 54-63), the rejection should be withdrawn.

Claims 3, 4, 6, and 8 depend from claim 1. The rejections of claims 3, 4, 6, and 8 should be withdrawn for the reasons provided above.

Quek fails to disclose an air gap between the first via dielectric layer and the top layer, as is recited in claim 5. Such an air gap can be understood by studying Applicants' Figure 11, where via dielectric layer 104 and top layer 108 remain in place after decomposing portions of layer 106 to form air gaps. The air gap in Figure 11 is thus between remaining portions of layers 104 and 108. The Examiner has characterized layer 12 of Quek as the first via dielectric layer, layer 14 of Quek as the trench dielectric layer, and layer 42 of Quek as the top layer. In Quek, the air gap is formed by removing both layer 12 and 14. As portions of layer 14 is removed under layer 12 and portions of layer 42 are removed over layer 12, the

resulting air gap is not between layer 12 and layer 42, as is recited in the claim. The rejection is unsupported in the art and should be withdrawn.

Quek fails to disclose a photosensitive trench dielectric layer comprised of a matrix material and a porogen material, where decomposing the photosensitive trench dielectric layer comprises removing at least some of the porogen material from the matrix material, leaving a porous trench dielectric layer between the first via dielectric layer and the top layer, as is recited in claim 7. Rather, Quek discloses completely removing sections of the trench dielectric layer. The rejection is unsupported in the art and should be withdrawn.

Claim 20 has been amended to recite that decomposing the first photosensitive trench dielectric layer occurs without removing the second via dielectric layer over at least some decomposed portions of the first photosensitive trench dielectric layer and without removing the first via dielectric layer under at least some decomposed portions of the first photosensitive trench dielectric layer. As Quek does not disclose such an arrangement, but instead discloses removing **all three** of the via dielectric layer, the trench dielectric layer, and the top layer to form an air gap in a volume formerly occupied by all three layers (*see*, Quek, Figure 6, col. 5 lines 54-63), the rejection should be withdrawn.

Claims 22-23 depend from claim 20. The rejections of claims 22-23 should be withdrawn for the reasons provided above.

Claim Rejections under 35 U.S.C. 103(a):

Claims 2 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Quek.

Claims 2 and 9 depend from claim 1. Quek does not disclose or suggest the limitations recited in claim 1. Withdrawal of the rejections of claims 2 and 9 is requested.

Respectfully submitted,

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